

Role of Direct Oral Anticoagulants in Management of Catheter Related Intra-Cardiac Thrombus in Cancer Patients

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Background

- Malignancy is a well known hyper coagulable state. Many cancer patients have in-dwelling vascular lines for chemotherapy, which increases the probability of catheter related thrombus.
- Even though low-molecular-weight heparins (LMWHs) are the preferred agents to manage cancer-associated thrombosis (CAT), Direct Oral Anticoagulants (DOACs) have been proven to be non-inferior to LMWH in preventing recurrence of venous thromboembolism (VTE) in cancer patients.
- However, the role of DOACs in the management of intra-cardiac thrombus in cancer patients with catheters remains unclear.

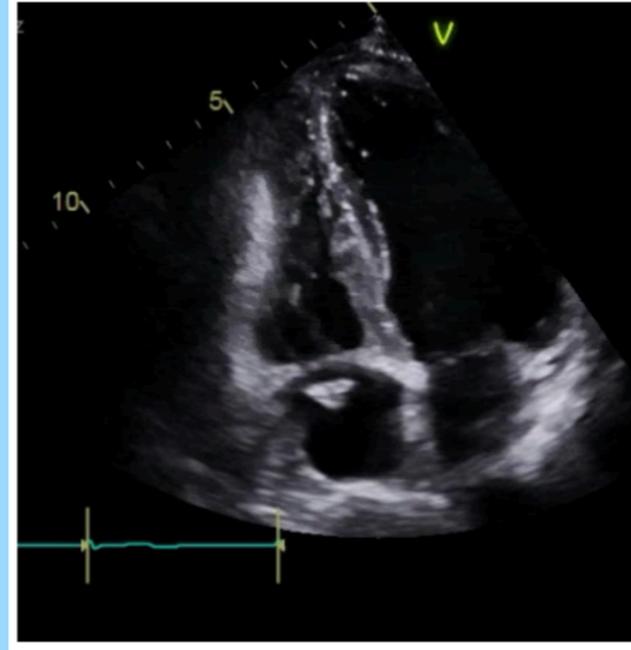
Methods

We searched Medline databases for articles about Anticoagulation for management of Intracardiac thrombus in Cancer patients and catheter related thrombus.

Discussion

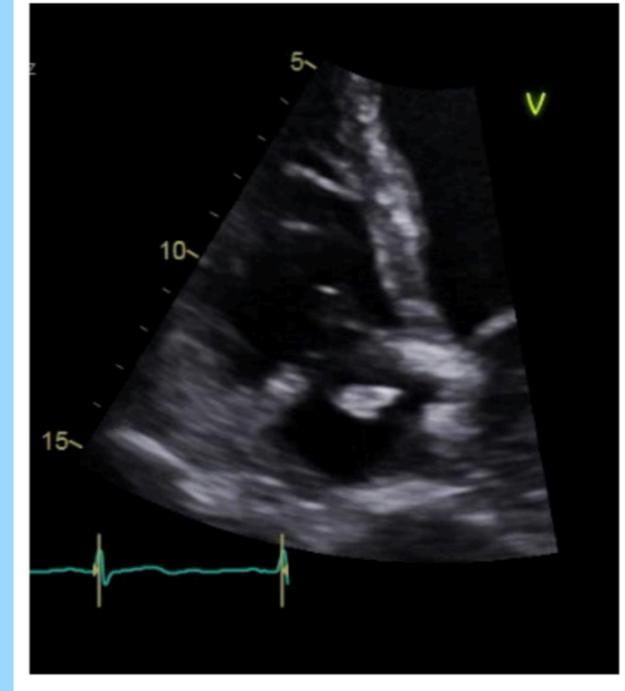
A 46 year old Caucasian lady with no significant past medical history was evaluated for an abnormal mammogram earlier this year. She was diagnosed with invasive ductal carcinoma of the right breast and subsequently underwent right total mastectomy with axillary node dissection. A portacath was inserted into the right Internal Jugular Vein for administering chemotherapy (docetaxel, carboplatin, and trastuzumab). Trans-thoracic echocardiogram (TTE) was performed every 3 months to assess the cardiac function during chemotherapy. A mobile echo density was seen in the Right Atrium on both TTE and confirmatory transesophageal echocardiogram. The echo density was most consistent with thrombus. The patient was started on apixaban 10mg twice daily for a week and then 5mg twice daily thereafter. Repeat Echocardiogram done 4 weeks later revealed that the thrombus was still present, but there was no propagation or increase in its size. Computed tomography confirmed that there had been no pulmonary embolism secondary to the right atrial thrombus. The mediport was removed after 3 weeks of anticoagulation. Anticoagulation was planned for a minimum of 3 months, with concurrent monthly serial echocardiographic evaluation.

Echo 11-6-18 RA thrombus 4 chamber view:



RA thrombus before initiation of Apixaban

Echo 12-5-18 4 chamber with clot:



RA thrombus persisting 4 weeks post treatment with Apixaban

Conclusion

- Patients with cancer have a high risk of developing VTE. Guidelines recommend treatment with LMWH. Studies have shown clear benefit of LMWH over Warfarin in cancer patients with VTE, but the optimal management of cancer patients with catheters and intracardiac clot remains unclear.
- Though there have been cases showing successful resolution of LV thrombus with Apixaban, the results have not been consistent.
- Further studies are required to determine the efficacy and safety of treating Intracardiac clots with DOACs in cancer patients.